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Maine Department of Environmental Protection

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# **Spill Prevention, Control and Countermeasure Report**

**Maine Department of Environmental Protection**

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**January 15, 2012**

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## **Report to the Legislature**

### **Maine Department of Environmental Protection SPCC Program**

January 15, 2012

#### **I. Introduction**

Federal regulations under 40 CFR Part 112 require Spill Prevention Control and Countermeasure (SPCC) plans for aboveground oil storage facilities having a total aboveground storage capacity exceeding 1,320 gallons. These rules were first promulgated in the 1970's under the Clean Water Act by the U.S. Environmental Protection Agency (EPA) and were most recently revised in November of 2009. The primary focus of the federal regulations is the protection of surface waters.

The Maine Legislature enacted 38 MRSA §570-K(5) in March 2002, giving the Maine Department of Environmental Protection (DEP) authority to enforce the federal SPCC requirements for retail, marketing and distribution facilities in Maine. The Maine SPCC program is more limited in scope than EPA's and only has jurisdiction over facilities such as service stations, bulk plants (i.e. facilities where oil is stored in bulk prior to distribution), marinas and airports. The State law does not apply to home heating oil tanks or other tanks used to store oil for consumption on the premises. The Maine SPCC Program is administered by the DEP's Bureau of Remediation and Waste Management (BRWM), Division of Technical Services.

The statute, as amended in 2005, requires the DEP to report to the Legislature by January 15, 2006, and on that date every 2 years thereafter, on all activities undertaken by the DEP under the provisions of section 38 MRSA §570-K(5). This report is being submitted to satisfy the 2012 reporting requirement.

#### **II. Program Goals**

The goals of Maine's SPCC Program are to:

- Protect human health and the environment from the risks associated with oil spills;
- Reduce oil spill clean-up costs; and
- Protect ground water, surface water and other resources from oil spills at aboveground storage tank (AST) facilities by improving spill prevention and control.

#### **III. Summary of Primary Tasks for SPCC Program, 2010 – 2011**

1. *Administers legislation regarding underground piping at AST facilities and siting of new ASTs in Wellhead Protection areas.*

In addition to administering Maine's SPCC Program, program staff also administers the law pertaining to underground product piping associated with aboveground motor fuel tanks

established in 2006 as well as provides technical support to the Bureau's administration of the Wellhead Protection Laws regarding the installation of new aboveground tanks established in 2008.

In August of 2006, legislation was adopted by the Maine Legislature (Public Law 2005, chapter 491) that established new requirements for certain facilities. These requirements apply to any tanks at a facility where the tank is installed above ground, the tank stores motor fuel (gasoline, diesel, biodiesel, aviation gasoline, jet fuel, gasohol, or other fuels used in the operation of a vehicle or motor engine), and the tank is connected to underground fuel piping.

This legislation was adopted in response to the loophole that existed in the piping requirements for AST facilities. Underground piping installed prior to June 24, 1991, the effective date of 38 MRSA §570-K(3), was not required to have any leak detection until and unless it is replaced, and there was no replacement schedule mandated by statute. As a result, some older underground piping at AST facilities may have operated without leak detection until a leak was discovered resulting in costly clean-ups funded by the Ground Water Oil Clean-up Fund, at which point it would then be replaced and brought in compliance with all the current requirements of Chapter 691, DEP Rules for Underground Oil Storage Facilities. This 2006 law brought motor fuel underground piping associated with ASTs up to the same standards applied to piping associated with underground oil storage tanks (USTs).

Since 2006, MRSA §570-K(3) established several important deadlines for AST facilities:

By January 1, 2007, register motor fuel ASTs (for diesel ASTs see third deadline below) with underground piping (One aspect to note is that with this registration requirement is a \$100 triennial fee for each motor fuel AST with underground piping.);

By July 1, 2007, and annually thereafter, submit inspection reports from a Certified Tank Installer or Certified Tank Inspector of underground piping systems associated with motor fuel ASTs (for diesel ASTs see fourth deadline below);

By January 1, 2009, register diesel ASTs with underground piping;

By July 1, 2009, and annually thereafter, submit inspection reports from a Certified Tank Installer or Certified Tank Inspector of underground piping systems associated with diesel ASTs; and

By January 1, 2011, retrofit pre-June 24, 1991 underground piping systems at all motor fuel ASTs to meet the DEP's leak detection standards consisting of secondary containment with continuous electronic monitoring.

In 2008, the Maine Legislature passed a new law (Public Law 2008, chapter 569) to protect existing public and private water supplies, as well as future water supplies (i.e. sand and gravel aquifers), from the threats of spills and leaks from aboveground oil storage tanks as

well as other types of businesses that have historically posed a significant risk to drinking water.

As of October 1, 2008, Maine law (38 M.R.S.A § 1391-1399) prohibits the installation of new aboveground oil storage tank (AST) facilities, such as motor fuel storage facilities and bulk fuel plants, in areas where an installation is likely to pose a threat to drinking water. The specific prohibitions are:

- No new ASTs within the source water protection area of a public drinking water well, or within 1000 feet of the public water well (whichever is greater), and
- No new ASTs within 300 feet of a private well (except for a private water supply well located on the same property as a facility and serving only that facility).

The law applies to new petroleum storage facilities. Existing facilities or facilities under construction where the Department has determined a substantial amount of money or effort has been expended on the completion of the facility prior to the effective date of this law were exempt. Heating oil tanks for use on the premises are exempt.

The statute also authorized the Department to promulgate regulations restricting the location of new AST facilities on significant sand and gravel aquifers mapped by the Maine Geologic Survey in a manner similar to existing restrictions on new UST facilities. Following input from stakeholders, these rules were adopted by the Maine Board of Environmental Protection on October 15, 2009. As of July 1, 2010, no new AST facilities may be installed over a significant sand and gravel aquifer.

This now places both AST and UST facilities under the same siting restrictions regarding proximity to public and/or private drinking water wells and significant sand and gravel aquifers.

*2. Mailings to owners/operators and interested parties regarding AST regulation.*

January of 2011 – Mailing to AST motor fuel facilities owners with underground piping reminding them that their underground piping must be inspected annually and that a passing annual inspection report must be submitted to the department.

February of 2011 – Mailing to AST motor fuel facility owners with non-compliant underground piping whose facilities were out of service reminding them that their facilities could not be returned to service until the piping was upgraded to meet current requirements.

March of 2011 – Mailing to Certified Tank Installers and Inspectors regarding new AST with Underground Piping Annual Inspection Form and Inspector's Handbook.

*3. Conduct presentations for facility owners/tank installers/inspectors, consultants, and interested parties.*

In April of 2010, SPCC program staff presented information at the DEP's Tank Installer/Inspector training seminar in Augusta regarding piping upgrade requirements for ASTs. An update on progress toward meeting this statutory requirement was presented at the Fall 2011 Maine Energy Marketers Association underground tank installer training seminar.

4. *Create and update forms and documents pertaining to AST regulation.*

In March 2011 - Updated fact sheet on AST siting restriction law to include significant sand and gravel aquifers.

In March 2011 - Revised AST with underground piping annual inspection form and inspector's handbook.

In March 2011 – Updated SPCC inspection form to reflect underground piping requirements.

In June of 2011- Updated worksheet regarding AST siting restrictions for inclusion in the State Fire Marshal's permit application to include sand and gravel aquifers.

In September 2011 – Updated SPCC Guidance Document to reflect 2009 amendments to the SPCC rule.

5. *Merge State Fire Marshal AST data into the DEP's tank database.*

The State Fire Marshal's Office (SFMO) collects one-time data from AST facilities when they initially permit their tanks.

An ongoing database task is to incorporate AST data from the SFMO into the DEP's existing database for underground storage tank (UST) facilities. During 2005, SFMO staff was trained in how to enter data into the DEP tanks database and have since been doing so.

New permits issued by the SFMO for ASTs are entered into the tanks database and assigned a DEP facility registration number. In 2010 and 2011, 84 AST facilities permitted by the SFMO were entered into the tanks database.

DEP SPCC program staff continues to meet monthly with staff from the SFMO and staff overseeing the DEP tanks database to discuss issues and problems with the database. The DEP is seeking to contract with an outside consultant to rectify some ongoing database problems as well as make upgrades to better accommodate data specific to AST facilities.

6. *Review State Fire Marshal AST Permit applications for compliance with DEP siting restriction law.*

Since August of 2008, The State Fire Marshal's Office (SFMO) has forwarded all AST permit applications to the SPCC staff person for review for compliance with the AST siting restriction requirements concurrent with SFMO's construction permit review. Such technical reviews are assisted by the Division of Technical Services hydrogeologists and OIT GIS staff. This collaborative effort with the SFMO avoids the permitting by one agency of a new AST facility that the other agency's statute prohibits. It is also more convenient for the applicant and is a substitute for a AST registration requirement.

From 2010 to 2011, SPCC staff has reviewed 119 State Fire Marshal Permit applications for compliance with the AST siting restriction requirements. Of these 119 applications, five applications were denied by the SFMO due to the proposed facility's proximity to public drinking water wells, private drinking water wells or significant sand and gravel aquifers without the required variance from the Department. One of the five facilities began the variance process, but the project was later rejected by the town. The other four facilities have not sought a variance and therefore did not construct their proposed facilities.

7. *Provide and update educational materials for the regulated AST facilities.*

An SPCC guidance document and model SPCC plans were developed by early 2003 with the assistance of Jacques-Whitford, a consulting firm. The guidance document summarizes the SPCC regulations and other requirements pertaining to AST facilities. These documents have been maintained and updated by DEP staff following the amendments to the federal SPCC rule and other related rule changes. In addition, DEP staff developed an SPCC web page devoted to oil AST facilities and posted the web page in June of 2003. The web site is periodically updated to include new requirements and updated lists and forms pertaining to AST facilities. The web page is located at: <http://www.maine.gov/dep/rwm/abovegroundtanks/index.htm>

8. *Conduct technical assistance site visits to individual facilities.*

Program staff visited individual facilities in 2010 and 2011 to provide site-specific recommendations for spill prevention and control, and to facilitate SPCC planning as well as underground piping registration, inspection requirements and facility upgrades where needed. 44 site visits were conducted in 2010 and 2011. Fewer than half of the facilities visited in 2010-11 had an SPCC plan. The most commonly observed problem was lack of, or inadequate, overfill protection measures for tanks. The second most commonly observed problem was inadequate secondary containment for tanks.

Of the 44 facilities inspected, 25 (57%) had underground product piping. Only one of these facilities did not meet the State's current standards for noncorrosive piping. Of the 25 facilities with underground piping, 17 (68%) did not meet the current standard for piping leak detection under DEP Rules Chapter 691 and were required to upgrade their piping systems by January 1, 2011. The remaining 32% of the facilities with underground piping met the requirements for noncorrosive piping and leak detection.

Summary data from the 2010 and 2011 SPCC field season are presented under Section IV below.

9. *Requests for Information*

SPCC program staff responds to telephone and e-mail requests from other agency staff, facility owners/managers, consultants and the general public seeking information pertaining to AST facilities such as spill prevention/control, siting as well as other topics such as home heating oil tanks and hazardous waste on a daily basis.

**IV. 2010 - 2011 SPCC Technical Assistance Site Visits**

***Summary Statistics for Technical Assistance Program, 2010 and 2011:***

Total number of technical assistance site visits conducted during 2010 and 2011: 44

Retail Service Stations - 11  
Bulk Plants - 4  
Bulk Plant & Retail Service Station Combined - 1  
Marinas - 8  
Airports - 2  
Motor Fleet - 9  
Heating - 5  
Generator - 1  
Hydro-electric - 2  
Private Fueling - 1

*Note: Not all of these facilities are subject to Maine's State SPCC regulations because some facilities were below the 1,320 gallon oil storage threshold or are used for on-site consumption.*

***AST Facilities Inspected in 2010 and 2011:***

Number of facilities having SPCC plans (percentage of all facilities visited in 2010 and 2011):

- Number of inspected facilities determined not to be regulated under the SPCC rule: 2 (5%)  
Of the remaining 42 facilities:
- Number of facilities required to have an SPCC plan that had a certified plan: 18 (43%)
- Number of facilities required to have an SPCC plan that did not have a plan: 24 (57%)

Type of tank secondary containment used by facilities - number of facilities (percentage of all facilities visited in 2010 and 2011):

- Containment dikes: 29 (66%)
- Double-walled tanks: 8 (18%)
- No or inadequate secondary containment for tanks: 5 (11%)
- Secondary Containment was not applicable (hydro equipment): 2 (5%)

Most commonly seen problems - number of facilities visited in 2010 and 2011:



- No or inadequate overfill protection: 18 (41% of all facilities visited)
- No or inadequate secondary containment for tanks: 5 (11% of all facilities visited)
- No or inadequate containment for loading rack at bulk plants: 4 (80% of bulk plants visited)

AST Facilities with underground piping – number of facilities visited in 2010 and 2011:

- Total number of facilities with underground piping: 25
- Facilities having underground unprotected steel piping: 1
- Facilities with non-corrosive piping systems but no leak detection: 16
- Facilities with double-walled piping systems and continuous leak detection systems but the leak detection system was not functioning/not maintained/the alarm was ignored: 3
- Facilities with double-walled piping systems and continuous leak detection systems that appeared to be functioning and being maintained properly: 5

Proximity to Sensitive Resources – number of all facilities visited in 2010 and 2011:

- Number of facilities located over a Significant Sand and Gravel Aquifer: 5 (11%)
- Number of facilities within 1000 feet of a public water supply: 2 (5%)
- Number of facilities within a Source Water Protection Area for a public drinking water supply: 1(2%)
- Number of facilities within 300 feet of a private water supply: 10 (23%)
- Number of facilities within 300 feet of surface water: 15 (34%)

### ***Facilities Referred to Enforcement Staff in 2010 and 2011***

Of the 153 AST motor fuel facilities with associated underground product piping registered with the Department, five facilities were referred to enforcement staff for failure to comply with the January 1, 2011 deadline to upgrade pre-1991 piping with leak detection. Six additional facilities were referred to enforcement staff for failure to comply with the annual inspection requirement.

To date, one of the five facilities that received notices of violations (NOVs) in May of 2011 for failure to upgrade their underground piping prior to January 1, 2011 has upgraded their underground piping to meet current leak detection standards.

To date one of the six facilities that received NOVs for failure to comply with the annual inspection requirement has submitted a passing annual inspection report to the Department and is currently in compliance with the annual inspection law.

### ***Requests for SPCC Technical Assistance Visits in 2010 and 2011***

Of the 44 SPCC site visits conducted in 2010 and 2011, 16 inspections were at the request of the individual facility owners.

Although the Maine SPCC program has jurisdiction over and focuses on retail and marketing and distribution facilities, SPCC staff has received requests from both retail and non-retail facilities for assistance with their SPCC issues. In 2010 and 2011, DEP responded to requests for

technical assistance visits from 16 owners of facilities where the tank use included: bulk, retail, fleet fueling, hydroelectric and onsite heating fuel.

## **V. Communication & Coordination with the U.S. EPA**

SPCC program staff contacts staff at the U.S. EPA New England Regional Office in Boston for guidance as required on interpreting the requirements of the federal SPCC regulation. Contacts with the EPA staff were primarily by e-mail and telephone calls. Some of the topics discussed included tank inspection standards, secondary containment requirements, overfill protection requirements, federal spill reporting requirements, and status of proposed federal rule changes and other federal documents.

EPA staff has referred AST facility owners in Maine to DEP staff for technical assistance regarding SPCC implementation, tank testing and State of Maine requirements. In addition, Maine DEP Staff has accompanied EPA staff on two joint SPCC inspections in 2010 and 2011. This is significantly lower than in past years due to recent federal restrictions on out of state travel.

EPA staff consistently informs Maine SPCC staff regarding upcoming EPA inspections and copies Maine staff on all follow-up correspondence.

## **VI. Conclusion**

Legislation enacted in Maine in 2002 (Title 38 Section 570(K)) authorizes the Maine DEP to enforce compliance with federal SPCC regulations for AST facilities that market or distribute oil to others. The law also requires DEP to provide educational and technical materials for use by regulated facilities.

Since the inception of Maine's SPCC program, the overall program goal has been to educate AST facility owners and operators regarding compliance with state and federal rules through an increased effort in technical assistance and outreach rather than enforcement.

SPCC Plan requirements are primarily driven by the federal regulations, 40 CFR 112. However, because other newly enacted state legislation pertaining to ASTs also affects the design, construction and operation of facilities that are required to have SPCC Plans, the work of the DEP's Maine SPCC program has expanded to address those issues as well.

Because AST facilities have historically not been regulated as rigorously as underground oil storage tank (UST) facilities, the objective of the program is to continue to educate AST facility owners and operators regarding changing regulatory requirements and further reduce the risk of discharges at AST facilities and their subsequent impact on the environment and public health.